



Exploration of the needs and potential spiritual capacities of mothers of premature infants hospitalized in the neonatal intensive care unit: A Qualitative Study

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Abstract

Background: The birth of a premature baby and the long treatment process lead to conflict and inconsistency between the hope, values, and beliefs of mothers and the occurrence of spiritual distress. This study aims to explore the needs and potential spiritual capacities of mothers of premature babies admitted to the NICU.

Methods: This qualitative content analysis study included 15 mothers of premature infants hospitalized in four neonatal intensive care units in Mashhad, Iran, in 2021. The participants were selected using purposeful sampling and engaged in deep, semi-structured interviews with the FICA (Faith, importance, community, address) questionnaire. The study included mothers of premature babies born between 28 and 32 weeks who were hospitalized for at least three days, did not have mental disorders, and were identified as Iranian or Muslim. The data were analyzed using the content analysis method developed by Granheim and Lundman.

Results: The data analysis revealed four main themes. The first theme referred to "potential spiritual capacities," with subthemes including belief in a divine source, belief in religious rituals, and empathetic support. The other three themes refer to spiritual needs, including "challenges of faith," encompassing subthemes of doubts in beliefs and guilt, "need for compassionate care," which includes subthemes related to the necessity of a deep connection between the nurse and the mother, the need for dignity in care, and finally, 'need for value and positive expectations,' featuring subthemes addressing the challenges of meaning of life and the need for hope, highlights the spiritual needs of mothers.

Conclusion: Many parents of premature babies share similar spiritual needs. This research provides a new perspective for understanding the spiritual needs of premature baby mothers. Nurses should assess these needs and design appropriate interventions according to their potential spiritual capacities.

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Highlights

What is current knowledge?

- The unstable conditions and environment of the NICU create a crisis of spirit and meaning, leading to specific spiritual needs.
- The spiritual needs of mothers with preterm or ill infants in the NICU are often overlooked.

What is new here?

- Recognizing these capacities and paying special attention to their spiritual needs can help nurses design spiritual interventions that promote hope and tranquility for these mothers.
- Mothers of premature infants possess significant spiritual capacities. In Iranian Muslim culture, beliefs and the support received from others represent important aspects of these spiritual capacities. The primary spiritual needs of mothers of premature babies include dignity, hope, and compassionate care. Recognizing these capacities and paying special attention to their spiritual needs can provide valuable guidance for nurses in designing interventions that promote hope and tranquility for these mothers.

Introduction

The admission of infants to the neonatal intensive care unit (NICU) can be a traumatic and challenging experience for parents (1). Mothers can experience high levels of anxiety, depression, and posttraumatic stress symptoms (2), which disrupts their emotional and psychological bond with the child (3) and leads to an insecure attachment pattern (4).

The long process of treating and caring for a premature baby has led to the experience of conflict and disharmony between the caregiver's hope, values, and beliefs toward God and the emergence of a spiritual crisis and conflict with spiritual issues in various ways. As a result, his relationship with God has been limited (5). The complexity of NICU conditions raises questions about life's meaning, prompting a search for purpose that can lead to conflict, mental crises, and spiritual needs (6). Spiritual needs originate from all human beings, and neglecting these needs can lead to significant spiritual conflicts (7).

Spirituality is one way to cope with stressful situations; it improves mastery of stress, and spiritual care is essential in supporting families in the NICU (8). Although healthcare systems worldwide have realized the importance and

usefulness of spirituality in providing care (9), the duration of spiritual care in Iranian hospitals is concise, and spirituality has received less attention from health professionals (10). As the results of these studies show, nurses in NICUs pay attention to the physical needs of newborns. Thus far, special needs, especially the spiritual needs of mothers of newborns hospitalized in the NICU, have not received enough attention from healthcare providers (11).

Paying attention to mothers' spiritual needs will help nurses take comprehensive care of them (8). On the other hand, not addressing parents' religious and spiritual needs may lead to parents struggling with existential questions and fears that should be addressed by therapists (5). A study by Bossing et al. in 2018 revealed that the spiritual needs of mothers of sick or premature babies were not met and that the religious needs of mothers with babies with uncertain prognoses were more intense (12).

Cultural and social climate differences affect mothers' understanding of their needs; however, the challenges they face in different societies are different (13). Many studies have identified various spiritual needs (12,14), and needs dependent on cultural, historical, and social contexts and beliefs should be considered in every society (15).

Considering that the concept of spiritual needs is a subjective phenomenon, people's understanding and experience should be explored in terms of their minds and experiences; thus, a qualitative study in this field can be of great value. The qualitative research method is suitable for studying spiritual needs and care because qualitative researchers interpret events from the participants' perspective (16).

Therefore, considering the sparsity of research on the religious and spiritual needs of mothers of premature babies in the NICU and the lack of identification of their potential spiritual capacities, Further research is needed to examine the religious and spiritual perspectives of mothers with infants in the NICU. This study aimed to explore the spiritual needs of mothers of premature babies admitted to the NICU. The research question was, "What are the spiritual needs of mothers of premature babies hospitalized in the NICU?"

Methods

This qualitative study employed a conventional content analysis methodology. The participants were mothers of premature newborns selected via purposive sampling. The research was conducted in four neonatal intensive care units in four hospitals affiliated with Mashhad University of Medical Sciences (Iran). Data collection occurred from April to September 2021.

Semi-structured interviews were conducted using the FICA (Faith, importance, community, address) questionnaire as a guide for the interview questions (Table 1). The FICA spiritual history tool is a standardized instrument for spiritual assessment developed by Dr. Christina Puchalski (17). It facilitates healthcare professionals' incorporation of open-ended questions about spirituality into obtaining a patient's spiritual history.

Table 1. Guide to interview questions based on the FICA questionnaire.

F (Faith)	Do you consider yourself a religious/spiritual person? Do spiritual beliefs help you adapt to stress? What gives meaning to your life?
I (Importance)	What is the importance of your faith or belief in your life? How have your beliefs affected how you manage stress? What role do your beliefs play in recovering your health?
C (Community)	Are you a member of religious/spiritual groups? Do these groups support you? How? Is there a group of people who you like or care about?
A (Address)	What do you expect to be done to support your spirituality?

FICA uses a conversational approach to address four key domains: faith/belief/meaning, importance and influence, and community and considers the spiritual aspects of care (17). Field notes were also used to complete the survey. In the field notes, various states of mothers were observed before, during, and after the interview process in the designated section. For instance, on one occasion, we entered the section for an interview, and a mother was reading the Quran. She also had a prayer book placed next to her bed. When asked what she was doing, she replied that she felt very distressed and anxious. She said, "I read these to find peace." The researcher observed that one significant source of strength and meaning for this mother was her faith and trust in God. Probing questions were asked about the emotional needs of mothers, which differ from person to person. The interviews continued until the necessary richness and saturation of information were reached so that no new theme or content could be added to the data. After coordinating with the relevant authorities and referring them to the NICU centers, the researcher selected the mothers from the list of hospitalized premature babies and interviewed willing, qualified people. Before the interviews, the participants were informed about the research and its objectives, and they were assured of the confidentiality of their information. Then, consent was obtained from the participants. On this basis, 15 mothers were interviewed until repeated data were obtained. Mothers with premature babies born between 28 to 32 weeks of gestation were included in the study if they met the following criteria: at least three days had passed since their baby was hospitalized, they reported no mental disorders, they identified as Iranian or Muslim, and they expressed a desire and ability to share their profound experiences and feelings regarding their spiritual needs. The interviews were conducted in a quiet atmosphere in the hospital and lasted 45 to 60 minutes. Interviews were conducted by a qualified individual with experience guided by a spiritual care specialist. All the interviews were fully recorded, transcribed word by word, and analyzed.

A researcher and a spiritual care specialist conducted the analysis using the conditional content analysis method of Granheim and Lundman (2004) (18). To analyze the content of the qualitative data by two researchers and experts in spiritual care, the entire interview was conducted immediately after each interview. The whole text was read for a general understanding of its content, meaning units and primary codes were determined, similar primary codes in more comprehensive classes were classified, and the main content of the classes was suggested. After the interviews, the materials were read several times, and a general understanding of the participants' statements was obtained that was in line with the purpose of the research. Then, meaning units or primary codes were extracted, and the codes were merged and classified based on their similarity, aiming at maximum homogeneity within the classes and maximum heterogeneity between the classes. At the end of this stage, the spiritual needs of mothers of premature babies were obtained and explained. The final analysis combined theoretical analysis with insights gained from experimental observations and reported findings.

To ensure trustworthiness, the criteria established by Lincoln and Guba were utilized (19). To increase the accuracy and validity of findings, the extracted interviews and codes were presented to four study participants to confirm that they aligned with their understanding and interpretations. Allocating sufficient time for the study and maintaining open and empathetic communication with participants were also key factors in enhancing the credibility of the study's data. Additionally, the researchers aimed for prolonged engagement with the data and continuous comparison. A team approach was utilized to analyze the dependability and confirmability of the data. Reports, handwritten notes, and research memos were shared with another researcher, and the derived themes were discussed and agreed upon. Furthermore, two other qualitative researchers were asked to review and code the interviews randomly. There was a close agreement between these two researchers and the research team on the final coding. The study's credibility was supported by prolonged engagement with participants, maximum diversity sampling, and member checking.

Results

Fifteen mothers of premature infants aged between 18 and 38 years, with a mean age of 27.53 ± 5.31 , participated in this study. The mean gestational age of their infants was 30.33 ± 1.62 weeks. Table 2 presents the frequency distributions of the demographic characteristics of mothers of premature infants. Four main themes were extracted from the data content analysis, and each theme had several subthemes and subcategories. The four main themes were potential spiritual capacities, belief challenges, the need for compassionate care, and the need for valuing and positive expectations (Table 3).

The first extracted theme was spiritual potential, which included three categories: "belief in a divine source," "belief in religious rituals," and "empathic support." The second theme identified in the content analysis focused on faith-related challenges. This theme highlights two layers of challenges: doubts in beliefs and feelings of guilt. The third theme was the need for compassionate care with two subclasses: a deep connection between the nurse and the mother and the need for dignity in care. The last main theme extracted was the need for value and positive expectations, which had two subcategories: the challenges of the meaning of life and the need for hope.

A. Potential spiritual capacities

The first central theme extracted from the interviews with mothers of premature babies was potential spiritual capacity. The two subthemes of belief in the eternal divine source and belief in religious rituals were among essential internal spiritual potentials formed in the context of family, the education system, and society; they are intangible and immaterial. The subtheme of empathic support was placed as the third subtheme of potential spiritual capacities in the set of potential external spiritual capacities in a person's circle of family and social relationships. In the present study, the circles of family relations of mothers of premature babies hospitalized in the NICU included fathers, mothers, spouses, children, and wives. In some cases, grandparents were included in the circles of individuals' family relations. A circle of social relationships involved mothers, relatives, acquaintances, neighbors, and friends. In this study, hospital personnel and medical staff were also part of external spiritual capital.

A-1- Belief in a divine source

These questions were asked: "What do you believe when problems and hardships occur?" and "How do these spiritual beliefs help you deal with stress?". A mother answered, "I believe in God and the Prophet Muhammad (Peace Be Upon Him) and in religious orders.". Another mother responded, "I believe in God, I pray, I read the Quran, I fast, and I always need God in my life. I never lose hope in His presence." (p:3). Therefore, believing in a superior and holy governing force in life and accepting that God has control of their lives in His hands and that they rely on Him in challenges and constraints empowered them to face any obstacles and hardships.

A-2- Belief in religious rituals

The second subtheme of potential spiritual capacity was the belief in religious rituals. This subtheme is extracted from the answers of most mothers participating in the study. Therefore, the following questions were asked: which of your beliefs has had a greater impact on solving your problems? What specific problems have been resolved through your faith and beliefs? And how would you feel if your beliefs did not provide you with support during difficult times?

One of the mothers said, "In times of difficulty and hardship, I turn to the Imams of Ahl al-Bayt (Peace Be Upon Them). I pray to God, recite zikr, offer prayers, and give charity.". Sometimes, my problem is solved; sometimes, it is not." It does not work sometimes, and I get upset. However, over time, I have realized that if God did not give me something, then he gave me something better" (p:10). Another mother said, "I always solve all my problems by appealing to Imam Reza (Peace be upon Him). She continued that some of her problems were family problems that were solved, and the hospitalization of her baby. She offered 50 thousand toman for the health of her baby, and with the grace of the Imam, her child recovered." (p:6).

A-3- Empathetic support

The theme of empathic support refers to a set of forms of psychological and spiritual support. The mother of a 30-week-old baby girl said, "In this situation, my mother helps me the most; I am in contact with my friends and relatives by phone" (p:11). Another mother said, "I am only in contact with my family," (p:2). A 28-year-old mother of a 31-week-old premature baby boy said: "I do not share my problems with anyone, I only grieve with God, I do not talk to any of my family members except my husband. He calms me down a lot." (p:8).

B- Challenges of faith

Illness is a serious challenge during life's crisis. If this disease is related to a child who has just opened his eyes to the world, it is a deeper challenge that involves the person's existential dimensions. The theme of religious challenges includes the subthemes of religious doubts, the challenge of the meaning of life, and feelings of guilt.

B-1. Doubts in beliefs

When their child is hospitalized at birth, mothers of premature babies face various forms of spiritual distress and numerous challenges. They include the question of divine justice (Why my baby and why should the baby suffer). In this regard, a mother said: "I am searching for answers to my questions to soothe me, wondering why this innocent and pure child must suffer so much. I wish he had not been born prematurely." (p: 9).

The mother of a 29-week-old baby said sadly, "I feel like God has forgotten me, doesn't care about me, or doesn't listen to my prayers." (p:1).

B-2. Feelings of guilt

In such a situation, some mothers feel guilty, and in their behavior and actions, they look for a reason to condemn and blame themselves for the situation. One mother said, "Because I was not under a specialist's supervision, my child was born prematurely." Now, I have a guilty conscience and a sense of guilt. Why should my baby be born prematurely and suffer so much?" (p:13). Another mother related the premature birth of her baby to the breakup of her relationship with her husband's mother and felt guilty.

J. The need for compassionate care

When a patient complains of pain or suffering or is worried about himself or his family, the nurses and medical staff are present and available to him. Their response to the patient's pain and suffering and their way of providing nursing care are very important. Therefore, the third main theme is receiving compassionate care. This main theme includes two subthemes: the need for a deep relationship between the nurse and the mother and the need to preserve the mother's dignity.

C-1. The deep connection between nurses and mothers

The second subtheme of compassionate care is the deep connection between the nurse and the patient. It includes several important topics, including the necessity for staff to be present and attentive to mothers, the importance of respectful behavior from staff, the need to answer questions regarding the baby's illness, the requirement for honesty, the significance of empathy, and the value of companionship. One mother stated, "I need detailed information from the NICU doctor and nurse about my child's changing condition; I want to be close to my child." (p. 15). A 30-year-old mother made this statement of a 28-week-old infant. She asked, "Can you tell me exactly when I will be discharged? Why did this happen to my baby? If I had been under the care of a gynecologist, would my baby not have been born prematurely? If you could answer these questions, it would help us feel calmer." (p. 5).

C-2. Dignity in care

The second subtheme of compassionate care was the mother's dignity. The need for dignity includes observing human principles, respect, maintaining

independence and trust, interacting with the patient, and exchanging information. One of the mothers said, "They feel dignified when they are taken seriously and receive the information they need. Patients feel pressured when they are neglected. The medical personnel do not have the necessary information and are not trustworthy." (p:8) They have endured a lot and see their human dignity under threat.

D. The need for value and positive expectations

Self-worth is the importance we place on ourselves: an emotional perspective that defines how we feel about ourselves compared to others and why. Self-worth is a fundamental part of our existence and shapes our perception of ourselves. Everything we think about, feel, and behave about is a product of the value we give ourselves. Self-worth is a sensitive issue. A sense of worth affects our actions and conscious choices. A sense of worth makes us avoid what hurts our lives and embrace things that improve us. Therefore, the fourth main theme is the need for value and positive expectations. This main theme includes two subthemes: the challenge of the meaning of life and the need to receive hope and spirit.

D-1. The challenges of the meaning of life

Mothers say that the birth of a premature baby with expressions such as life becomes a dark, hard experience and that life is a bitter test of God. The mother of a 28-week-old premature baby whose baby had been sick for a long time expressed, "I wish I knew what is the wisdom of my baby being premature? My life has become meaningless; why should this disaster happen to me? After giving birth and seeing her condition in the ward, it was as if the world collapsed on me (Mother's cry)" (p:7).

D-2. Need to hope

Hope is good for humanity in any situation. This positive feeling causes forward movement and effort in life. Without it, the desire to reach the goal disappears. One of the most essential needs of mothers of premature babies is to receive hope and motivation from the people around them, especially the medical staff. In this context, a mother said, "Do not leave me alone, give me spirit and hope, make my spirit happy"(p:4). One of the participating mothers said, "I have many problems in my life. If my child was born healthy, I would be very well. I need meetings where I can talk about these issues and calm down." (p:12).

Table 2. Frequency distributions of the demographic characteristics of the mothers of premature babies in the study.

Variable		Number (Percentage)
Education	Middle school	6 (40)
	Diploma	5 (33.3)
	Academic	4 (26.7)
The economic situation	Medium	5 (33.3)
	Weak	10 (66.7)
Number of births	Firstborn	8 (53.3)
	Polygynous	7 (46.7)

Table 3. Main themes, subthemes, and some codes extracted from the study

Potential spiritual capacities	Belief in a divine source	Belief in God and the Prophet/trust in God's will/satisfaction with God's will/belief in Islam/belief in Ahl-Bayt/belief in Quran/trust in God in hardships/seeking help from God in times of problems
	Belief in religious rituals	Prayer/making a vow/fasting/making an end/giving alms/pilgrimage/participation in religious ceremonies
	Empathetic support	Empathy/companionship/pleasant treatment staff/spiritual treatment staff/hospital spiritual facilities/visits (In person/telephone)/talking with acquaintances/relatives (Or neighbors) help in taking care of the children/taking care of household affairs/wife's strength of heart and Mother/good friend/financial support/care of treatment staff/having economic security
Challenges of faith	Doubts in beliefs	The question of divine justice (Why me?)/why my baby? why this time? objection to suffering/God's indifference to me/change in the understanding of the concept of spirituality/lack of trust in God
	Feelings of guilt	Feeling guilty/reviewing the past/feeling of shame/guilty conscience
The need for compassionate care	The need to deep communication between nurse and mother	The need to be present/the need to answer questions about the baby's history/the need for the staff to be honest/the need for the staff to pay attention to the mothers/the need to visit/communicate with compassion/communicate with the heart and not just verbally
	Dignity in care	The need for respectful behavior of the personnel/respect for the mother's character/need for empathy/need for companionship/respect for parents' decisions/respect for beliefs/acceptance of the mother regardless of economic, social, and educational level/the need to provide facilities for the mother's relative well-being Kindness, paying attention to the mother's problems with the baby, trying to reduce the mother's suffering, observing ethics, and understanding the mother's difficult situation
Need for value and positive expectations	Challenges of the meaning of life	Messing up the meaning of life, bewilderment, loss of meaning, meaninglessness, and meaninglessness of life, disturbance in understanding the philosophy of life, the feeling of failure to achieve goals, and loss of motivation
	Need for hope	The need to receive motivation/the need for happiness/talking with a counselor in groups and individually/in search of peace, the need for hope

Discussion

This research classified the spiritual needs of mothers of premature babies into four main themes: potential spiritual capacities, belief challenges, the need for compassionate care, and the need for value and positive expectations.

The first theme extracted in the present study is potential spiritual capacity, which refers to concepts such as belief in a divine eternal source, adherence to religious rituals, and empathic support. It is obtained through the continuous interaction of a person with himself or herself in partnership with greater power, which improves optimism, provides comfort to a person in difficult times, and helps his or her spiritual health (20,21). Research evidence has shown that many African American people turn to God in times of illness and suffering for relief and trust in God's plan to deal with the disease, and this reduces stress and facilitates treatment (22-24), and trust in God in Difficulties are associated with positive impressions in life (25,26). Clinging to God is extracted from other potential spiritual capacities so that when there is a medical crisis for which the usual health care does not seem useful, such as suffering from a serious disease, praying and worshipping God, and religious commands, etc., is performed more and brings a person to peace (27). The results of the study by Hadian Shirazi and colleagues on seven mothers of premature infants hospitalized in the NICU indicated that the mothers chose the strategy of reciting the Holy Quran to cope with the challenging and stressful conditions of the intensive care unit (28). Empathic support and supportive relationships with family members, friends, and neighbors are other capacities of spiritual maturity that help individuals obtain spiritual peace during crises (29,30).

The second extracted theme is belief challenges, manifesting as doubts in beliefs and feelings of guilt in mothers. One study revealed that fatal diseases such as cancer can profoundly affect people's religious beliefs, leading to religious confusion (31), existential and meaningful worries, despair, conflict in beliefs, anger toward God, and feelings of being abandoned by Him (32). The results of a study on the experiences of mothers with a child with learning disabilities also indicated that they felt guilty and blamed themselves (33).

The results of a study on the experiences of mothers with a child with learning disabilities also indicated that they felt guilty and blamed themselves (30).

In the present study, mothers whose newborns were in critical condition or seriously ill experienced a disruption in their mental and spiritual peace. This situation led to confusion regarding their beliefs, to the extent that the meaning of their lives was also affected. In other words, life became devoid of meaning for them.

The need to receive compassionate care from the medical staff is the third extracted theme that the mothers participating in the study. This was essential to forging a deep connection between the nurse and the mother. Having kind behavior, preserving the mother's dignity, respecting her, actively listening, answering their questions, taking good care of their baby, and creating hope and spirit in them were the most critical aspects of the need for compassionate care. Therefore, a high standard of care, commitment, and communication with one's family were mentioned as examples of compassionate care (34). Nurses, as members of the care profession, are expected to establish sincere relationships with patients through compassionate behaviors to alleviate pain and suffering (35) and support the parents of premature babies hospitalized in the NICU. This is one of the primary roles of nursing and one of the duties of the medical care team (36). Moreover, one study revealed that spirituality is inseparable from a child's life and development. When children are faced with a chronic physical illness, they need spiritual care from healthcare professionals (37).

The last theme from the extracted needs of mothers of babies hospitalized in the NICU is the need for value and positive expectations. Therefore, receiving compassionate care from a nurse significantly improves the perceived hope and self-efficacy of the mothers of these infants (38). Because most families with sick infants seek new hope (39), listening to patients' questions about "why me" statements or anger at God or others can help nurses address the need to find meaning and purpose, to understand. In addition, by listening to patients' words, nurses and other doctors must find ways to discuss these issues (40).

This qualitative study offers a comprehensive understanding of the spiritual needs of mothers with premature infants; however, the findings should be interpreted considering certain limitations. First, cultural, religious, and social differences can significantly impact the understanding and expression of the spiritual needs of mothers. The results of this research may not be generalizable to other communities within a specific culture. Therefore, it is recommended that further research be conducted within the contexts of other cultures. Second, the spiritual needs of mothers of premature infants may be a sensitive subject, and some mothers may refrain from expressing their needs for personal, cultural, or religious reasons.

Conclusion

Admitting a baby to the NICU at birth generates extensive spiritual needs for mothers. Many mothers of premature babies in this study had similar spiritual needs. Attention to human dignity, hope, and compassionate care were the common spiritual needs of these mothers. Receiving support from others and their spiritual beliefs and commitment to them were considered significant strengths of the mothers in this study. It is essential for nurses to carefully assess the spiritual needs of mothers of preterm infants and make use of their potential resources to provide comprehensive care.

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Ethical statement

This study was approved by the university's ethics committee, with code number IR.MUMS.NURSE.REC.1400.036. All ethical principles in the research, including obtaining informed consent, permission for audio recording, maintaining the confidentiality of participants' identities, the right to withdraw from the study, and ethical considerations in publishing the results, were observed.

Conflicts of interest

There were no conflicts of interest in this study.

Author contributions

NR: Responsible for writing the original draft, formulating and evolving the overarching research goals and aims, as well as conceptualizing the research, investigating the topic, developing the methodology, and contributing to the writing of the manuscript. ZK: Participated in data collection and authored the background section of this article. NYB: Served as a major contributor in writing the manuscript. NZ: Guided conducting interviews and conducted data analysis. All authors reviewed and approved the final manuscript.

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